

[illegible]

Page 1

[illegible]

Step

[illegible][illegible]

Customer:

[REDACTED]

Run Start




Date 7-11-12

Date:

Stop

Date:

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D350-748-241	Rev E								
100		0.00							
	DOCUMENT CONTROL								
DC	Memo	0.00							
Document Control	Photocopy bluefile & type labels per PPPD350-748-201		CHG001	Sulzer				BG	11-02-10
110		0.00							
	BENDING MACHINE - CROSSTUBES								
CNC Bend 2	Memo	0.00							
CNC Alpha 160 Bender	Bend tube as per Dwg D350-748-241 using CNC bender program D350A and Folio FT _____								10-11-23
120		0.00							
	QC15- Crosstube Dimensional Check								
QC	Memo	0.00							
Quality Control				Sulzer					P/b

W/O: 63748

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10.11.24	1/10	B/N 595878 ORIENT TUBE IN BENDER SO GRIND MARK IS ON SIDE.	AP	10-11-23		AP 10.11.24 QS/042	S 10/11/24

Part No: D350-748-201 PAR #: _____ Fault Category: stubes NCR: Yes No DQA: / Date: 11-02-22
 Resolution: ACC remark Disposition: remark QA: N/C Closed: _____ Date: _____

NCR: 63748

WORK ORDER NON-CONFORMANCE (NCR)

DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10.11.23	1/10	Tube bent high.	AP 10.11.23 QS/042	REMOVE 1/8" FROM HIGHEST CLIFF TO EVEN TUBE	AP 10-11-23	S 10/12/23 10/12/24	AP 10.11.23 QS/042	S 10/12/23

NOTE: Date & initial all entries

Work Order ID 63748

Friday, November 12, 2010 10:39:18 AM

Page 2

Item ID: D350-748-201

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Installation, High Aft

Start Date: 11/12/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 11/26/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

125

0.00



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

Stress relief

Heat treat crosstube as per QSI010 4.3

Temp: 375

Start time: 2h00

Finish time: 5:50pm

SAD 10-11-23

127

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8, 10/11/24

Qr

W/O: 63748

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10.12.13	141	- DEFLECT TUBE TO 3000 ¹² FOR 1 MINUTE - RE-MEASURE HEIGHT & WIDTH	CP	10.12.13	1	CP 10.12.13 QSI 672	10.12.13
10.12.13	142	- NDT TUBE FOLLOWING DEFLECTION TEST				CP 10.12.13 QSI 672	

Part No: D350-748-201 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 63748

Friday, November 12, 2010 10:39:18 AM

Page 3

Item ID: D350-748-201

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Installation, High Aft

Start Date: 11/12/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 11/26/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

0.00



Crosstubes

Crosstubes

Memo

0.00

Crosstubes

1-Drill Tube as per Dwg D350-748-241 Using DT8876 Drill Jigs,
Set-up drill table as per QSI 010

2-Deburr

3-Engrave Part # and Batch # as per Dwg D350-748-241

4-Remove all marks from tube within limits of D350-748-241

5- Apply a light coat of LPS3 on the interior of tube
Batch: _____

SAD 10-11-29

SAD 10-12-01

See Attached Email

140



QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

Memo

0.00

8/12/13

Pro on Back of 2nd Page

outsance- VDT issue R/O to acuren

R/O: 13113

CZ10/12/09①

pack: ensure copies of VDT results need attached to W/O;

11/12/10

Dart Aerospace Ltd

W/O: 63748		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/12/09	175	NDT per QSI 038 before + after quad testing Per eng. this time only P10: 13113	CL	10/11/09	①	U 10.12.09	
		rec'd + inspect	CL	10/12/10	①	U	

Part No: D350-748-201 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 63748

Friday, November 12, 2010 10:39:18 AM

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Item ID: D350-748-201

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Installation, High Aft

Start Date: 11/12/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 11/26/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150

Outsource process-Cadplate per QSI017 4.1.9.1

0.00



Outsource3

Memo

0.00

Outsource process - Cad plate

Issue P/O: 13128
Stress relief at 375° for 5 hours
Magnetic Particle Inspect per ASTM E1444
Cadium Plate per AMS-QQ-P-416B, Class 1, Type 2
Embrittle relief at 375° for 8 hours, Chromate Treat
Possible Supplier: Southwest United Industries
Ensure Certificate of Conformity is attached

CZ 10/12/14 ①

160

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure certificate of conformity is attached

11/18/14 ①

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/11/14 24 / 11.11.24

Spm = 82.030

rust = 0.067"

Issue P/O as per LPI as per ASTM 1417 level 2 as LPI as per QSI038

P/O: 13367 CZ 11/10/14 ①

rec'd + inspect + attached C of C to W/O

11/10/14 24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 63748

Friday, November 12, 2010 10:39:18 AM

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Item ID: D350-748-201

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Installation, High Aft

Start Date: 11/12/2010 Start Qty: 1.00

Required Date: 11/26/2010 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180

0.00



SprayPaint

SprayPaint

Memo

0.00

Spray Painting

1-Prime inside crosstube as per QSI 005 4.2
2-Paint Outside of Tube as per Dart QSI 005 4.2

11 02 02 ①

190

0.00



QC14- Inspect Spray Paint

QC

Memo

0.00

Quality Control

Then, Wrap in plastic bag to protect from scratches

11 - 02 - 03 ①

200

0.00



Crosstubes

Crosstubes

Memo

0.00

Crosstubes

1-Install Ground wire Insert, then insert screw and washer
2-Install Abrasion strips as per Dwg D350-748-241 & QSI 035.
3-Install supports Using Dt8876 as per Dwg D350-748-241, Torque to 60-80 IN-LBS

11 02 04 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 63748

Friday, November 12, 2010 10:39:18 AM

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Item ID: D350-748-201

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Installation, High Aft

Start Date: 11/12/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 11/26/2010 Req'd Qty: 1.00

Customer:




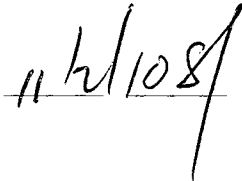


Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start

QC: Date: SPC (Y/N): Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210  QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
220  Packaging Packaging	Pick Kit Memo	0.00 0.00							
230  QC Quality Control	QC4- 100% Inspect kits for completeness Memo	0.00 0.00							

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 63748

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Friday, November 12, 2010 10:39:18 AM

Item ID: D350-748-201

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Installation, High Aft

Start Date: 11/12/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 11/26/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240		0.00							
	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPPD350-748-201								
	Location: <u>102</u>								
	PPP Rev: <u>A</u>								
250		0.00							
	QC21- Final Inspection - Work Order Release								
QC	Memo	0.00							
Quality Control									

11/02/14

11/02/14

MF 11-02-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

Friday, November 12, 2010 10:39:22 AM

Work Order ID: 63748

Parent Item: D350-748-201

Parent Item Name: Crosstube Installation, High Air

Start Date: 11/12/2010

Required Date: 11/26/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: A New Issue 06-07-05 JLM
 IPP Rev: B Update qty of MS21042L5 06-09-12 KJ
 IPP Rev C Combined manufacturing 08.04.02 EC verified by: DD
 IPP Rev:D 08-06-24 revD as per dwg DD verified by:EC
 IPP Rev: E 08.12.11 Step17 was step 21 KJ Verified by:EC IPP Rev:F
 10.08.04 added QSI010 4.3 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D350-748-241TRN Manufactured No



Crosstube Turning Detail

Location	Loc Qty	Loc Code
LG	3	
59549	1	
59551	1	
59587	1	

110 Each 3.0000



1

1

SAD 10-11-23

ALS4-1032-225 Purchased No



Insert

Location	Loc Qty	Loc Code
PK011	4520	
110768	4520	

200 Each 4,520.000



1

1

11-02-04

AN960JD10 NAS1149D0363J Purchased No



Washer

Location	Loc Qty	Loc Code
ST	6	
107715	6	
ST335	2	
105792	2	

200 Each 8.0000



1

1

11-02-04

B# 116007

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 2

Friday, November 12, 2010 10:39:22 AM

Work Order ID: 63748

Parent Item: D350-748-201

Parent item Name: Crosstube Installation, High Aft

Start Date: 11/12/2010

Required Date: 11/26/2010

Start Qty: 1.00

Required Qty: 1.00

D2856-400 Manufactured No

200 f

123.8130 1.181 1.243158



Abraison Strip



11-02-04

13# 63735

Location

Loc Qty

Loc Code

ST403

123.8130421

56626

0.00004211

59920

123.813

1- cut as per dwg D2856

D3502-1 Manufactured No

200 Each

48.0000 2 2



Support



11-02-04

Location

Loc Qty

Loc Code

ST063

24

61206

12

61843

12

ST066

24

50287

23

52903

1

MS21920-20 Purchased No

200 Each

57.0000 2 2



Clamp (per MIL-DTL-8783C)



11-02-04

Location

Loc Qty

Loc Code

LG

57

112624

2

114687

1

115057

4

115736

50

Friday, November 12, 2010 10:39:22 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 3

Friday, November 12, 2010 10:39:22 AM

Work Order ID: 63748

Parent Item: D350-748-201

Parent Item Name: Crosstube Installation, High / At

Start Date: 11/12/2010

Required Date: 11/26/2010

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

200

Each

131.0000

1

1



Screw



11-02-104

Location

Loc Qty

Loc Code

ST291

131

112794

3

112940

28

115935

100

AN4-41A

Purchased

No

220

Each

252.0000

8

8



Bolt



11/12/10

Location

Loc Qty

Loc Code

ST360

252

111424

4

113359

1

114941

57

115108

100

115374

40

115705

50

AN4-6A

Purchased

No

220

Each

952.0000

16

16



Bolt



11/12/10

Location

Loc Qty

Loc Code

ST356

952

112933

96

113149

17

115108

139

115457

500

115936

200

16

Friday, November 12, 2010 10:39:22 AM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Friday, November 12, 2010 10:39:22 AM

Work Order ID: 63748

Parent Item: D350-748-201

Parent Item Name: Crosstube Installation, High End

Start Date: 11/12/2010

Required Date: 11/26/2010

Start Qty: 1.00

Required Qty: 1.00

AN5-32A

Purchased

No

220

Each

252.0000

4



Bolt

Location

Loc Qty

Loc Code

ST340

252

114405

42

115016

50

115108

50

115589

60

115698

50



4
11/2/10

AN960JD416

NAS1149D0463J

Purchased

No

220

Each

24.0000

32



Washer

Location

Loc Qty

Loc Code

ST300

24

113288

24

AN960JD516

NAS1149D0563J

Purchased

No

220

Each

34.0000

8



Washer

Location

Loc Qty

Loc Code

ST

34

103694

18

107534

12

109287

4

D3500-1

Manufactured

No

220

Each

31.0000

4



Saddle

Location

Loc Qty

Loc Code

ST424

31

55605

2

60489

4

61650

25



4
Bd 838 11/2/10

Friday, November 12, 2010 10:39:22 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, November 12, 2010 10:39:22 AM

Work Order ID: 63748

Parent Item: D350-748-201

Parent Item Name: Crosstube Installation, High Aft

Start Date: 11/12/2010

Required Date: 11/26/2010

Start Qty: 1.00

Required Qty: 1.00

D3501-1

Manufactured No

220

Each

410.0000

16

16



Bushing



11/2/10

Location

Loc Qty

Loc Code

ST066

410

45402

15

45918

112

48268

3

53779

20

61196

100

61837

60

61984

100

Purchased

No

220

Each

2,556.000

24

24

MS21042L4



Nut



11/2/10

Location

Loc Qty

Loc Code

ST300

2556

113422

25

114523

8

115589

1423

115621

1100

Purchased

No

220

Each

1,389.000

4

4

MS21042L5



Nut



11/2/10

Location

Loc Qty

Loc Code

ST139

26

114813

26

ST300

1363

115156

163

115594

500

116104

200

116105

500

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

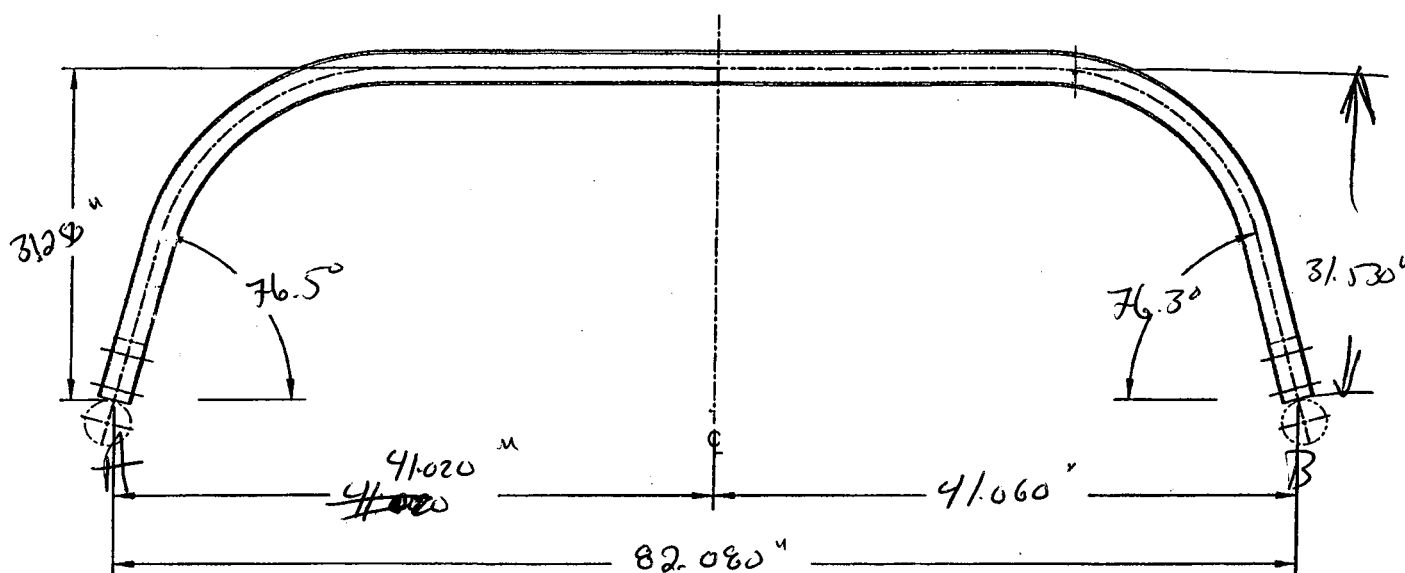
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	63748
Description: Crosstube High Aft (AS350/355)		Part Number:	D350-748-201
Inspection Dwg: D350-748-241 Rev: E		Page 1 of 1	

Required Dimension	Min	Max
Height	31.22	31.48
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.54	82.06



Comments
twist = .052" OK 10/11/23
RMV 1/8" FROM 31.53 SIDE.

QC15 Inspection	8
Date	10/11/23

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	10.08.23	Dwg Rev updated	KJ	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

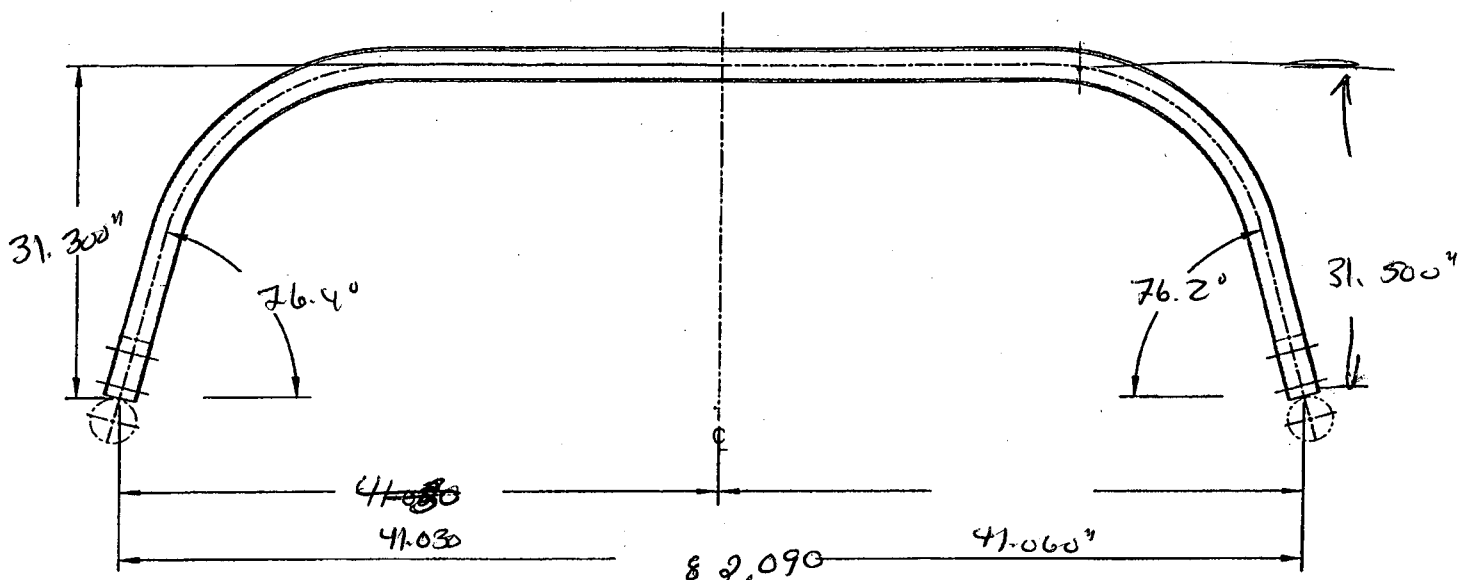
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	
Description: Crosstube High Aft (AS350/355)		Part Number:	D350-748-201
Inspection Dwg: D350-748-241 Rev: E		Page 1 of 1	

Required Dimension	Min	Max
Height	31.22	31.48
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.54	82.06



Comments
twist = .067" CK of 10.11.24
Re measure after stress relief

QC15 Inspection	S
Date	10/11/24

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	10.08.23	Dwg Rev updated	KJ	

Item	Qty -241	Part Number	Description
1	X	D350-748-241	CROSSTUBE ASSEMBLY (AS 350/355 HI AFT)
2	1	D6018-125	CROSSTUBE
3	2	D3502-1	SUPPORT
4	2	D2856-400-710	ABRASION STRIP
5	1	AELS-1032-225	INSERT
6	1	NAS1149D0363J	WASHER (OR AN960JD10)
7	2	MS21920-20	CLAMP (PER DART SPEC. M-MS21920-20)
8	1	MS27039-1-10	SCREW

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6018-125
FINISHED LENGTH = 122.700±0.06
- 2) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D350-748-241" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 29.85 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.297 HOLE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS 2759-1C AFTER TURNING.
- 12) INSTALL D2856-400-710 ABRASION STRIPS WITH A GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.
- 13) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.
- 14) TORQUE CLAMPS 60 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 48748
3810-11-15

OK CP 10.11.15
UNDER REVIEW
10.11.13

RELEASED
2009-10-29
MD

E	REVISE GENERAL NOTES; UPDATE TO CURRENT STANDARDS; RELOCATED FLAG #6 PER PAR 08-046 (ZN A8-3); ADD TOLERANCES (ZN C6-3, D2-3)	RF	09.09.30
D	MAG. PARTICLE AND CAD PLATE AS MFD.	CP	06.10.31
C	ADD CAD PLATING	CP	06.08.14
B	ADD D6018-125 & PRIME AND PAINT	CP	06.06.30
A	NEW ISSUE	CP	06.03.31
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>RF</u>	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<u>RF</u>	DRAWING NO.	REV. E
MFG. APPR.	<u>RF</u>	D350-748-241	SHEET 1 OF 4
APPROVED	<u>RF</u>	TITLE	SCALE
DE APPR.	<u>RF</u>	CROSSTUBE (AS 350/355 HI AFT)	NTS
DATE	09.09.30	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

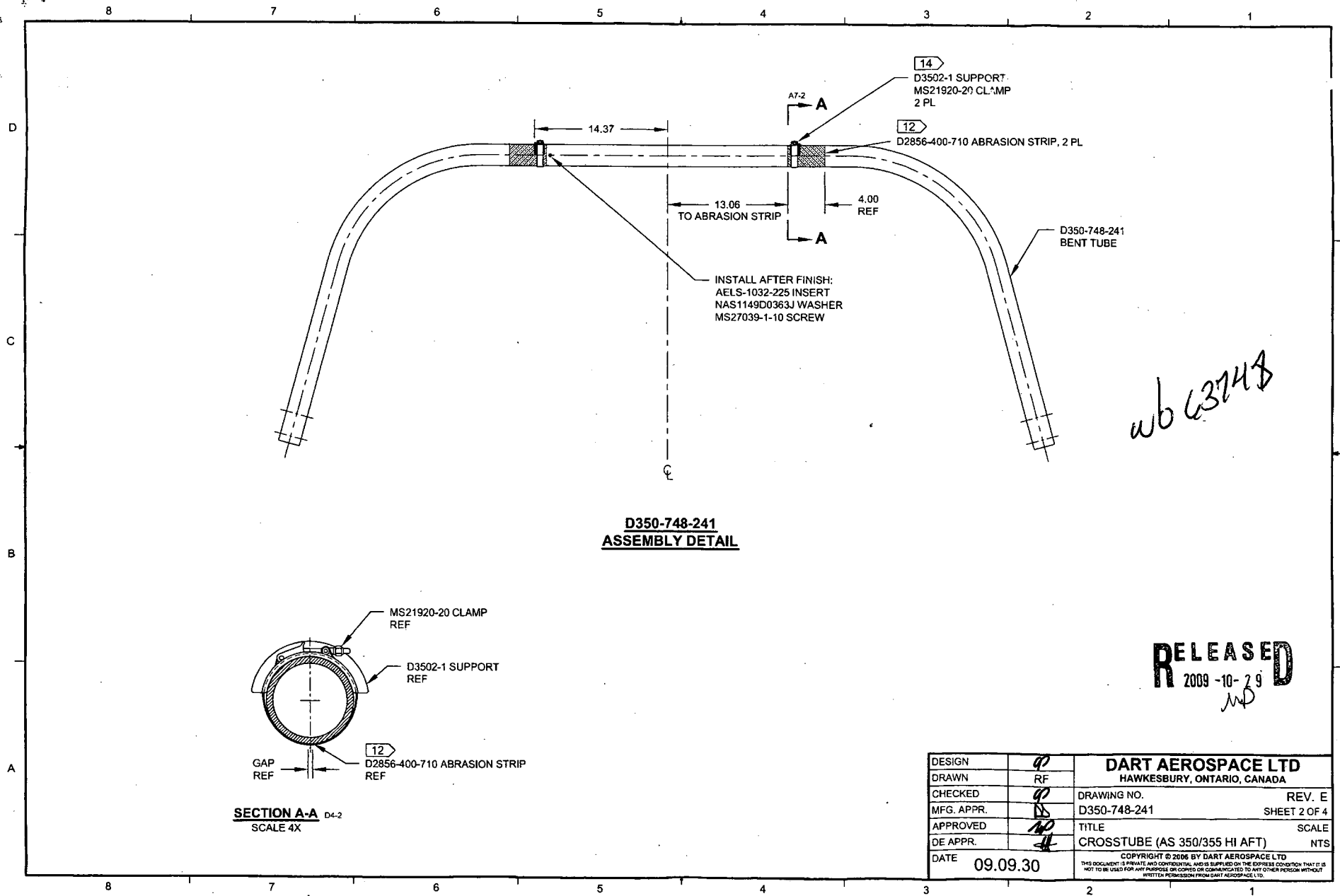
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASED
2009-10-29
MD

DESIGN	90	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	90	DRAWING NO.	REV. E
MFG. APPR.	DS	D350-748-241	SHEET 2 OF 4
APPROVED	140	TITLE	SCALE
DE APPR.	4	CROSSTUBE (AS 350/355 HI AFT)	NTS
DATE	09.09.30	<small>COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

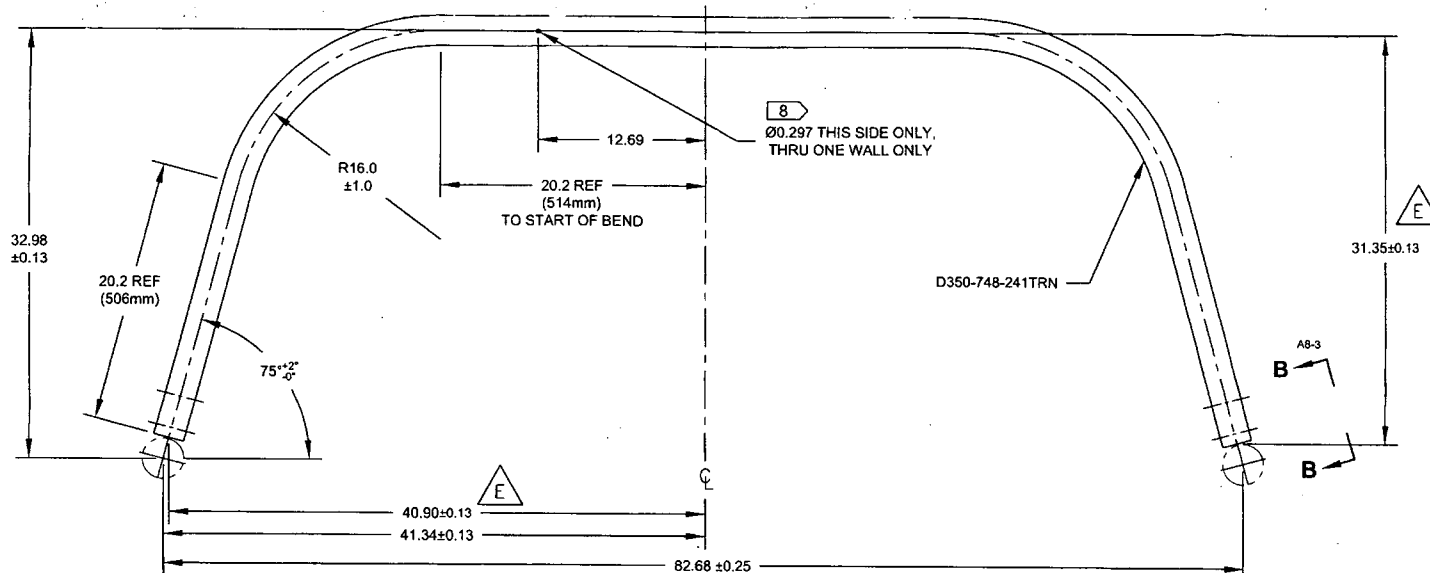
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

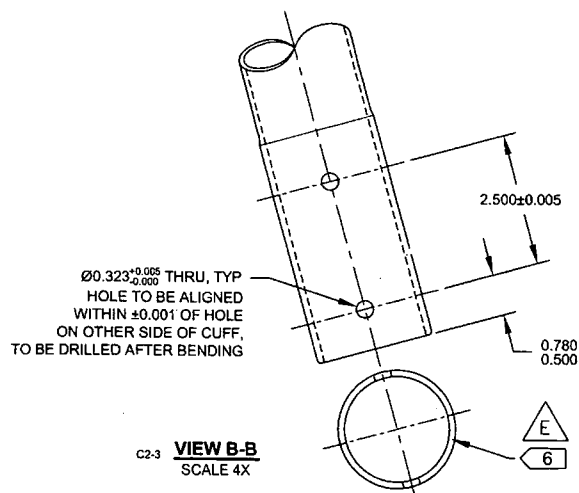
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D350-748-241
BENDING AND DRILLING DETAIL 10



VIEW B-B
SCALE 4X

RELEASED
2009-10-29
MD

DESIGN	92	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	92	D350-748-241	SHEET 3 OF 4
APPROVED	92	TITLE	SCALE
DE APPR.	92	CROSSTUBE (AS 350/355 HI AFT)	NTS
DATE	09.09.30	COPYRIGHT © 2006 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

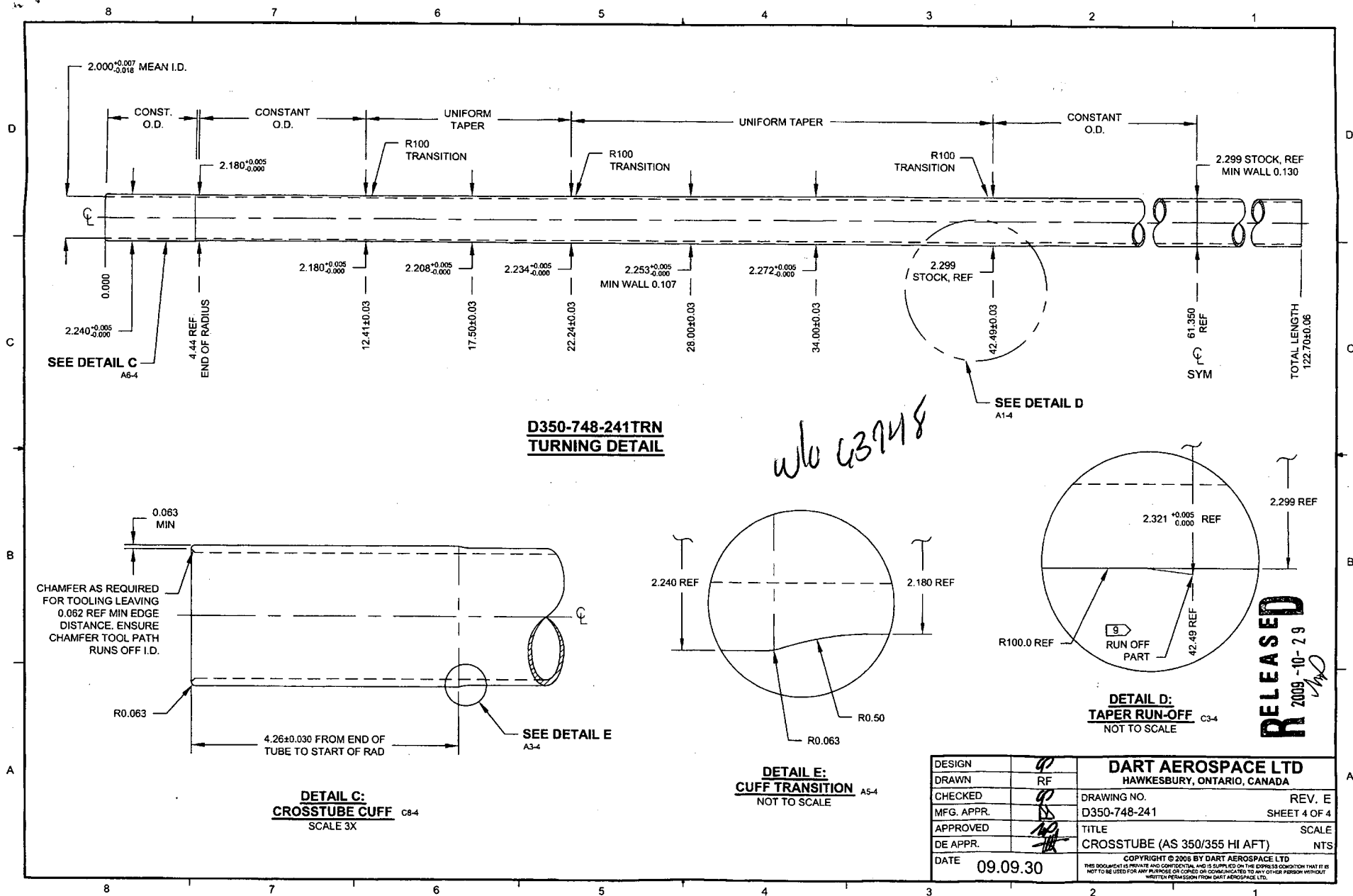
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

L Lacelle

From: David Shepherd [dshepherd@dartaero.com]
Sent: May 11, 2010 12:37 PM
To: 'L Lacelle'; 'Mike Petsche'
Cc: 'Bill Beckett'; 'Chris Provencal'; 'Dan Stow'; ssheldon@dartaero.com; 'Chantal Lavoie'
Subject: RE: 350 crosstubes

Linda,

As discussed, if the tubes have been structurally tested, it has been documented on the work orders, and Chris has signed off on them, then it is acceptable to me to release the parts.

David

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: Tuesday, May 11, 2010 8:37 AM
To: 'David Shepherd'; 'Mike Petsche'
Cc: 'Bill Beckett'; 'Chris Provencal'; 'Dan Stow'; ssheldon@dartaero.com; 'Chantal Lavoie'
Subject: RE: 350 crosstubes

Now that testing is done, can we ship out the batch that as been ready to heat treat?

LL

From: David Shepherd [mailto:dshepherd@dartaero.com]
Sent: April 27, 2010 3:40 PM
To: 'Mike Petsche'
Cc: 'Bill Beckett'; 'L Lacelle'; 'Chris Provencal'; 'Dan Stow'; ssheldon@dartaero.com
Subject: 350 crosstubes

Mike,

I discussed the 350 crosstube load testing with Bill a little while ago and this plan makes sense to him.

So, my recommendation to clear these crosstubes is to load the fwd crosstubes to 3500 lb and the aft crosstubes to 3000 lb in the deflection test rig and document on the work orders that this test has been completed. Hold max load for 1 minute. Per TP-D350-748-2, these loads represent the maximum load on these crosstubes at gross weight and are below the yield point of the material. I would like to request that Chris Provencal witness these tests and sign off the work orders based on his experience with Dart landing gears. My feeling is that if there is a problem with the parts, it will manifest itself during this load test. I, for one, would feel a lot more confident in testing each crosstube in this manner than relying totally on what Exova has to say. I think it would be very difficult to reach a conclusion on the whole batch on the basis of cracks in two parts from the batch.

I believe that we can accomplish this before next Friday, which also gives us time to hear what Exova has to say in case it has an impact on our decision. So far, what I have seen from Exova shows me that there are fluctuations in the heat treating but the tubes are heat treated to our specification.

For this reason, I believe we should tell DHS that it looks like we will be able to start shipping 350 crosstubes by May 7th pending a successful Engineering test of the material.

David.

No virus found in this incoming message.

Checked by AVG - www.avg.com

Version: 8.5.437 / Virus Database: 271.1.1/2865 - Release Date: 05/11/10 06:26:00

12/06/10



ACUREN

LIQUID PENETRANT TEST REPORT

P- 05492

PAGE 1 OF 1

CLIENT

ATTENTION

ADDRESS

PROJECT

ITEM(S) EXAMINED

DATE

ACUREN JOB NO.

POWOW No.

WORK LOCATION

ACCEPTANCE STD.

TIME

AM

PM

REV./DATE

JOB DESCRIPTION

PROCEDURE NO. LT-003 REV./DATE 2003

TECHNIQUE NO. LT-003 REV./DATE 2003

PART NO.

MATERIAL

THICKNESS

SCOPE

TEST DETAILS

METHOD	<input checked="" type="checkbox"/> FLUORESCENT	<input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH	<input type="checkbox"/> SOLVENT REMOVABLE	<input type="checkbox"/> POST EMULSIFIED
FAMILY BRAND	MACNAFLUOR		BLACK LIGHT S/N	13740	
PENETRANT	22-67	MINIMUM DWELL TIME	10	MIN.	LIGHTING EQUIP. <input checked="" type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT
PENETRANT REMOVER	Acu	MINIMUM DRY TIME	>10	MIN.	OTHER
DEVELOPER	SKD-32	MINIMUM DWELL TIME	10	MIN.	CAL DUE DATE FEB 05 2011
DEVELOPER TYPE	<input type="checkbox"/> NON AQUEOUS <input type="checkbox"/> AQUEOUS <input type="checkbox"/> DRY				

TEST SURFACE

SURFACE CONDITION	<input type="checkbox"/> AS GROUND	<input type="checkbox"/> AS WELDED	<input type="checkbox"/> MACHINED	<input type="checkbox"/> SHOT BLASTED	<input checked="" type="checkbox"/> CLEAN BARE METAL
SURFACE TEMPERATURE	<input type="checkbox"/> < -4°C/ 20°F		<input type="checkbox"/> -4°C/ 20°F TO 10°C/ 50°F		<input checked="" type="checkbox"/> 10°C/ 50°F TO 52°C/ 125°F
					<input type="checkbox"/> > 52°C/ 125°F

RESULTS-

☐ METRIC ☒ IMPERIAL

#	ITEMS	CRACKS - W.O.D	63746	✓	✓
1	1	-	63742	✓	✓
2	2	-	63748	✓	✓
3	3	-	63749	✓	✓
4	4	-	61763	✓	✓
5	5	-	61764	✓	✓
6	6	-	61765	✓	✓
7	7	-	61766	✓	✓
8	8	-		✓	✓
B	A	SEE NOTE		✓	✓
ITEMS				ACC.	251
SX MOUNTS - W.O.D		61890		✓	

NOTE: B = BEFORE DEFLECTION TEST
A = AFTER DEFLECTION TEST

ITEM ID: D350-748-201 (ITEMS #1, 2, 3, 4)

ITEM ID: D350-748-101 (ITEMS #5, 6, 7, 8)

ITEM ID: D3687-3 (MOUNTS)

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE	John Tolley	DTR # E63104
TECHNICIAN (SIGNATURE):	[Signature]	REPORT REVIEWED BY:
NAME (PRINT):	VES DESKESER	NAME INITIALS
CGSB LEVEL	2	CGSB LEVEL
CGSB REG. NO.	3049	CGSB REG. NO.

WHITE - CLIENT COPY

CANARY - OFFICE COPY

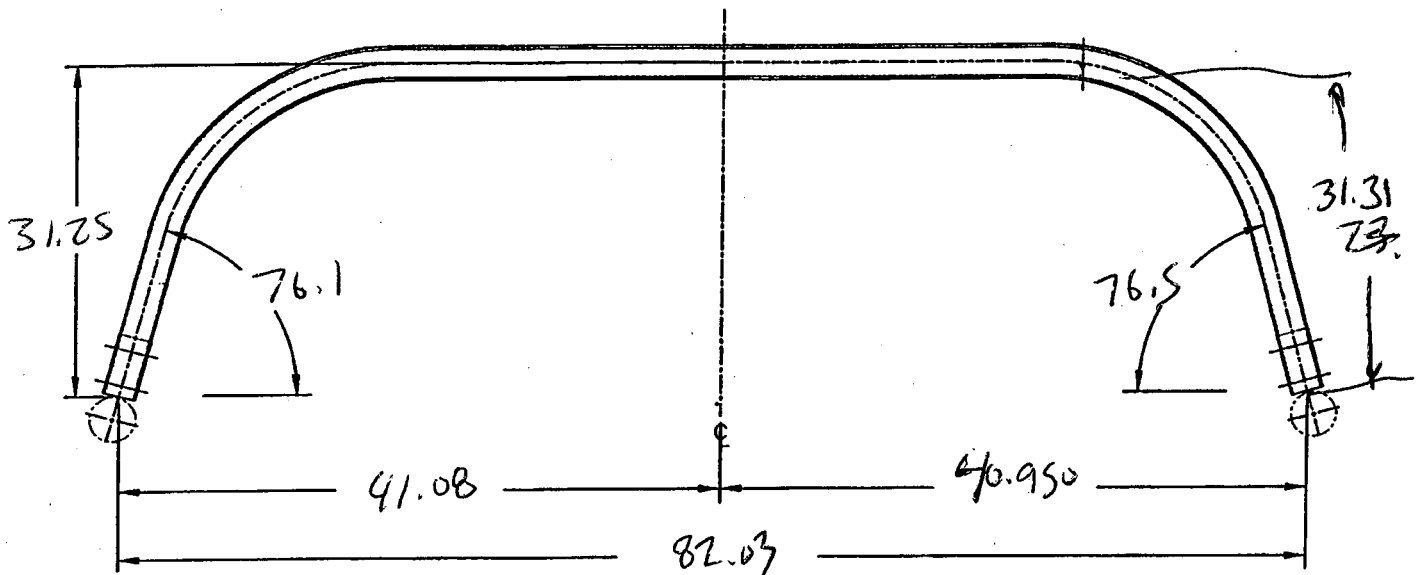
PINK - TECHNICIAN COPY

GOLD - OFFICE COPY

PT Sept 2005

DART AEROSPACE LTD		Work Order:	63748
Description: Crosstube High Aft (AS350/355)		Part Number:	D350-748-201
Inspection Dwg: D350-748-241 Rev: E		Page 1 of 1	

Required Dimension	Min	Max
Height	31.22	31.48
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.54	82.06



Comments
FOLLOWING DEFLECTION TEST
ACCEPTABLE 10.12.13

QC15 Inspection	10.12.13
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	10.08.23	Dwg Rev updated	KJ	

**CERTIFICATE OF
CONFORMANCE**

**CADORATH PLATING CO. LTD.
2150 LOGAN AVENUE
WINNIPEG, MANITOBA R2J-0J1**

DATE: Jan-14-2011

CONSIGNEE TO: Dart Aerospace Ltd.
1270 Aberdeen St.
Hawksbury, ON K6A 1K7

W/O #: 100757

INVOICE #: 52907

**CONTRACT OR
PURCHASE ORDER #** PO13128

DESCRIPTION: SKID

QTY 1

P/N # D350-748-201

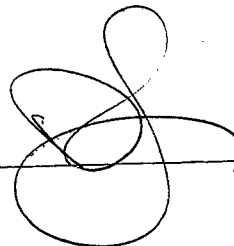
S/N # B63748

STRESS RELIEF BAKE @375 DEG. BAKE HEAT CHART #10-1335.
MPI INSPECTED IAW ASTM-E-1444. CADMIUM PLATED IAW AMS-
QQ-P-416C, TYPE 2 YELLOW, CLASS 1. BAKE HEAT CHART #11-5.

Sulav/24

**CERTIFICATE: I certify that the items indicated here on have
been inspected and tested and conform to all specifications
and requirements detailed on the contract or purchase order.**

Approved Inspector:





LIQUID PENETRANT TEST REPORT

P- 05496

PAGE 1 OF 2
TIME AM ☒ PM ☐

CLIENT
ATTENTION
ADDRESS
PROJECT
ITEM(S) EXAMINED

DART AEROSPACE
LINDA LACELLE / CHANTALE / IAN
1270, ABERDEN ST.
HAWKESBURY, ON
WET FLUO PENETRANT INSPECTION ON 14 "CROSSTUBES"; 4 "COLLECTIVE BELL CRACK"
SEE BELOW

DATE JAN/26/2011
ACUREN Job No. 188-11-
PO/VO No.
WORK LOCATION AS ADDRESS
ACCEPTANCE STD. ASTM1417/GST-038 REV./DATE 2005

OB DESCRIPTION
PROCEDURE No. LT-003 REV./DATE 2008 TECHNIQUE No. LT-002 REV./DATE 2008
ART No. MATERIAL ALODINE ALUMINUM THICKNESS N/A
SCOPE PERFORMED A WET FLUORESCENT LIQUID PENETRANT INSPECTION ON 100% OF THE EXTERNAL SURFACE

TEST DETAILS											
METHOD		<input checked="" type="checkbox"/> FLUORESCENT		<input type="checkbox"/> VISIBLE		<input checked="" type="checkbox"/> WATER WASH		<input type="checkbox"/> SOLVENT REMOVABLE		<input type="checkbox"/> POST EMULSIFIED	
AMILY BRAND		MAGDA Flux				BLACK LIGHT S/N 13798		OUTPUT > 1000 μ W/cm ²		<input checked="" type="checkbox"/> AMBIENT < 2 fc	
ENETRANT		Z6-67		MINIMUM DWELL TIME		10 MIN.		LIGHTING EQUIP.		<input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT <input type="checkbox"/> OUTPUT>100 fc @ SURFACE	
ENETRANT REMOVER		H ₂ O		MINIMUM DRY TIME		>10 MIN.		OTHER			
VELOPER		SKD-52		MINIMUM DWELL TIME		10 MIN.		LIGHT METER S/N		CAL DUE DATE FEB/05/2011	
VELOPER TYPE		<input checked="" type="checkbox"/> NON AQUEOUS		<input type="checkbox"/> AQUEOUS		<input type="checkbox"/> DRY					

TEST SURFACE					
SURFACE CONDITION	<input type="checkbox"/> AS GROUND	<input type="checkbox"/> AS WELDED	<input type="checkbox"/> MACHINED	<input type="checkbox"/> SHOT BLASTED	<input checked="" type="checkbox"/> CLEAN BARE METAL
SURFACE TEMPERATURE	<input type="checkbox"/> < -4°C/ 20°F	<input type="checkbox"/> -4°C/ 20°F TO 10°C/50°F	<input checked="" type="checkbox"/> 10°C/50°F TO 52°C/125°F	<input type="checkbox"/> > 52°C/125°F	

RESULTS- (<input type="checkbox"/> METRIC <input checked="" type="checkbox"/> IMPERIAL)							
ITEM	COMMENTS	ACCEPT	REJECT				
1	4 X "COLLECTIVE BELL CRACK"	✓		→ NOID 64913 → ITEM ID: - D350-748-101 (H.F.)			
2	CROSS-TUBE W.O. ID 63591	✓		→ ITEM ID: - D350-748-101 (H.F.)			
3	CROSS-TUBE W.O. ID 63592	✓		→ ITEM ID: - D350-748-101 (H.F.)			
4	CROSS-TUBE W.O. ID 63746	✓		→ ITEM ID: - D350-748-201 (H.A.)			
5	CROSS-TUBE W.O. ID 63747	✓		→ ITEM ID: - D350-748-201 (H.A.)			
6	CROSS-TUBE W.O. ID 63748	✓		→ ITEM ID: - D350-748-201 (H.A.)			
7	CROSS-TUBE W.O. ID 63749	✓		→ ITEM ID: - D350-748-201 (H.A.)			
SEE Page 2 of 2							

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES		DTR # <u>E63121</u>	
CLIENT REPRESENTATIVE	<u>Ian T. Hley</u>	REPORT REVIEWED BY:	
TECHNICIAN (SIGNATURE):	<u>YVES DESROSIERS</u>	NAME	INITIALS
JAME (PRINT):	<u>YVES DESROSIERS</u>		
CGSB LEVEL <u>2</u> 1 ST TECHNICIAN	CGSB LEVEL <u>2</u> 2 ND TECHNICIAN		
CGSB REG. No. <u>3049</u>	CGSB REG. No. <u>---</u>		



RAPPORT D'INSPECTION NON DESTRUCTIVE

RAPPORT#

(SUITE)

REPORT# P-05496

PAGE 2 DE 2

CLIENT DART AEROSPACE
ATTENTION LINDA LACELLE / CHANTAL / IANDATE JAN/26/2011HEURE ☒ AM ☐ PMACUREN W/O : 188-11-02103

RÉSULTATS

☐ MÉTRIQUE ☒ IMPÉRIALE

ITEM	COMMENTS	ACCEPT	REJECT	ITEM ID
8	CROSS TUBE W.O. ID 61763	✓		ITEM ID: D350-748-101A
9	CROSS TUBE W.O. ID 61764	✓		D350-748-101(H.F.)
10	CROSS TUBE W.O. ID 61765	✓		D350-748-101(H.F.)
11	CROSS TUBE W.O. ID 61766	✓		D350-748-101(H.F.)
12	CROSS TUBE W.O. ID 61767	✓		D350-748-201(H.A.)
13	CROSS TUBE W.O. ID 61768	✓		D350-748-201(H.A.)
14	CROSS TUBE W.O. ID 61769	✓		D350-748-201(H.A.)
15	CROSS TUBE W.O. ID 61770	✓		D350-748-201(H.A.)

— NO REJECTABLE INDICATION WAS DETECTED, AS PER APPLICABLE STANDARD

Étendue des services

L'entente selon laquelle le Groupe Acuren Inc. exécute les services ne concerne que les énoncés par écrit. En aucune circonstance ces services ne s'étendent au-delà de l'exécution des services demandés. Il est entendu que toutes les descriptions, les observations et les expressions d'opinions faites par Acuren reflètent les opinions ou les observations de l'entreprise fondées sur l'information et les hypothèses fournies par le propriétaire/opérateur, et elles ne constituent pas des déclarations ou des garanties ou ne peuvent être interprétées comme constituant. Le groupe Acuren Inc. n'assume aucune des responsabilités du propriétaire/opérateur, et le propriétaire/opérateur conserve la responsabilité entière des décisions prises en matière d'ingénierie, de fabrication, de réparation et d'usage à partir de l'information ou des données fournies par Acuren en rapport avec les services décrits dans les présentes ne peuvent excéder le coût des services rendus.

Norme de Diligence

Dans l'exécution des services, le Groupe Acuren Inc. applique le degré de diligence, le soin et la compétence normalement exercés dans des circonstances semblables par d'autres fournisseurs de ce type de services opérant dans la même localité ou dans une localité similaire. Aucune autre garantie, implicite ou explicite, n'est faite ou voulue par le Groupe Acuren Inc.

SIGNATURES

REPRÉSENTANT CLIENT

TECHNICIEN (SIGNATURE):

NOM (MOULÉ):

Bar T. Hey
MOULÉJ. DESJARDIS
1^{er} TECHNICIENONGC Niveau 2 SNT Niveau 2
ONGC N° REGISTRATION 3049[Signature]
SIGNATURE—
2nd TECHNICIENONGC Niveau — SNT Niveau —
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RAPPORT

RÉVISÉ PAR:

NOM

INITIALES